



Dart Aerospace Ltd.
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D4131-043
Job Sheet 192445



Part No: D4131-043

Job Qty: 12 pcs

Part Name: Doubler Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/25/19

Job Tracking No:

Created By: Marie Lajeunesse

Due Date: 4/30/19

Description:

Type: Stock *SOLD*

Note: DWG REV C SHEETS 2,9 IPP Rev:A 10.10.06 new issue DD verf:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Waterjet - Flow - 1	12 pcs		4/30/19	0.00	1.35	Waterjet - Flow		<i>02/19/04/11</i>
120	QC 8	12 pcs		4/30/19	0.00	0.00	QC 8 - 12		
							QC 8 - 14		
							QC 8 - 17		
							QC 8 - 20		
							QC 8 - 25		
							QC 8 - 3		
							QC 8 - 32		
							QC 8 - 33		
							QC 8 - 35		
							QC 8 - 39		
							QC 8 - 4		
							QC 8 - 44		
							QC 8 - 45		
							QC 8 - 49		
							QC 8 - 58		
							QC 8 - 8		
							QC 8 - 9		
							QC 8 - 68		
							QC 8 - 67		
							QC 8 - 1 (A)		
							QC 8 - 47		
							QC 8 - 40		
							QC 8 - 52		
							QC 8 - 23		
130	Small Fab - 2 - B4B	12 pcs		4/30/19	0.00	0.76	Small Fab - 1 - B4B		
							Small Fab - 2 - B4B		
							Small Fab - 3 - B4B		
							Small Fab - 4 - B4B		
							Small Fab - 5 - B4B		

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SCRAP P.T.O.

Scrap

DAS 40 9-89
APR 15 2019

DAS 58 9-89
APR 16 2019

				Small Fab - 6 - B4B					
				Small Fab - 7 - B4B					
150 QC 5	12 pcs	4/30/19	0.00 0.00	QC 5 - 10					
				QC 5 - 12					
				QC 5 - 17					
				QC 5 - 18					
				QC 5 - 19					
				QC 5 - 22					
				QC 5 - 24					
				QC 5 - 3					
				QC 5 - 43					
				QC 5 - 49					
				QC 5 - 51					
				QC 5 - 58					
				QC 5 - 68					
				QC 5 - 9					
				QC 5 - 50					
				QC 5 - 30					
				QC 5 - 40					
				160 Handfinish - 1-1 Chemical-B4B	12 pcs	4/30/19	0.00 0.68	Handfinish - 1 - 1 - B4B	
								Handfinish - 1 - 2 - B4B	
Handfinish - 1 - 3 - B4B									
Handfinish - 1 - 4 - B4B									
Handfinish - 1 - 5 - B4B									
Handfinish - 1 - 6 - B4B									
Handfinish - 1 - 7 - B4B									
Handfinish - 1 - 8 - B4B									
Handfinish - 1 - 9 - B4B									
Handfinish - 1 - 10 - B4B									
Handfinish - 1 - 11 - B4B									
Handfinish - 1 - 12 - B4B									
Handfinish - 1 - 13 - B4B									
Handfinish - 1 - 14 - B4B									
Handfinish - 1 - 15 - B4B									
Handfinish - 1 - 16 - B4B									
Handfinish - 1 - 17 - B4B									
Handfinish - 1 - 18 - B4B									
Handfinish - 1 - 19 - B4B									
Handfinish - 1 - 20 - B4B									
Handfinish - 1 - 21 - B4B									
Handfinish - 1 - 22 - B4B									
161 QC 7	12 pcs	4/30/19	0.00 0.00	QC 7 - 10					
				QC 7 - 13					
				QC 7 - 14					
				QC 7 - 15					
				QC 7 - 17					
				QC 7 - 18					
				QC 7 - 19					
				Plex 3/25/19 12:49 PM Dart.lajeunesse.marie					

					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	
165 Small Fab - 2 - B4B	12 pcs	4/30/19	0.00	0.76	Small Fab - 1 - B4B	
					Small Fab - 2 - B4B	
					Small Fab - 3 - B4B	
					Small Fab - 4 - B4B	
					Small Fab - 5 - B4B	
					Small Fab - 6 - B4B	
					Small Fab - 7 - B4B	
166 QC 5	12 pcs	4/30/19	0.00	0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
180 Packaging 3-1 - Stock - B4B	12 pcs	4/30/19	0.00	0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	

				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	12 pcs	4/30/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

Part Op **100** - 1-Cut D4131-7 as per Dwg Dwg Rev: Prog Rev: 2-Deburr as required
 Descriptions: **120** - QC8- Inspect parts - second check
130 - Small Fab - COUNTER SINK AS PER DWG Deburr if necessary.
150 - QC5- Inspect part completeness to step on W/O
160 - Chemical Conversion Coat per QSI005 4.1
161 - QC7-Inspect Chemical Conversion Coat
165 - Small Fab - ASSEMBLE NUT PLATES AS PER DWG
166 - QC5- Inspect part completeness to step on W/O
180 - Identify as per dwg & Stock Location:
190 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6S.063	6061-T6 .063 Sheet	2.1684 sf (.1807 ea)	100-Waterjet - Flow - 1	5076996 5D18535
MS20426AD3-3	Rivet	176 96 Ea (8 ea)	165-Small Fab - 2 - B4B	
MS21069L3	Anchor Nut	88 48 Ea (4 ea)	165-Small Fab - 2 - B4B	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Waterjet - Flow - 1	M6061T6S.063	2	217	0
165-Small Fab - 2 - B4B	MS20426AD3-3	96	1,597	0
	MS21069L3	48	316	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Doubler Assembly	0.098Inches + 0.004 - 0.001	0.102 0.097	Diameter	
2	Doubler Assembly	0.191Inches + 0.005 - 0.001	0.196 0.190	Diameter	
3	Doubler Assembly	0.250Inches ± 0.010	0.260 0.240		
4	Doubler Assembly	0.500Inches ± 0.010	0.510 0.490		
5	Doubler Assembly	0.405Inches ± 0.010	0.415 0.395		
6	Doubler Assembly	0.405Inches ± 0.010	0.415 0.395		
7	Doubler Assembly	0.590Inches ± 0.030	0.620 0.560		
8	Doubler Assembly	0.660Inches ± 0.030	0.690 0.630		
9	Doubler Assembly	3.640Inches ± 0.030	3.670 3.610		
10	Doubler Assembly	4.000Inches ± 0.010	4.010 3.990		
11	Doubler Assembly	4.100Inches ± 0.030	4.130 4.070		
12	Doubler Assembly	4.810Inches ± 0.030	4.840 4.780		
13	Doubler Assembly	4.600Inches ± 0.010	4.610 4.590		
14	Doubler Assembly	5.410Inches ± 0.030	5.440 5.380		
15	Doubler Assembly	0.063Inches ± 0.010	0.073 0.053		

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$$\begin{array}{r} 22 \\ \times 4 \\ \hline 88 \end{array}$$

$$\begin{array}{r} 122 \\ \times 8 \\ \hline 176 \end{array}$$

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																														
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																												
Description Work Order Deviation			Disposition																																																																													
			Completed By																																																																													
			Lead hand / Supervisor Approval Verification																																																																													
			QC / QA Coordinator Approval																																																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left;">Root Cause</th> <th colspan="4" style="text-align: left;">FAULT CATEGORY</th> </tr> </thead> <tbody> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> <td>Pressure/Forced ☐</td> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td colspan="4" rowspan="2" style="text-align: center; vertical-align: top;">OTHER : _____</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </tbody> </table>						Root Cause			FAULT CATEGORY				Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____				Misidentified ☐	Past Due ☐
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Container No: S172220



Part: D4131-043

Job No: 192445

Serial No/Batch: S172220

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
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CANADA
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www.dartaerospace.com

Date: 04/12/19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: <u>192445</u> Part No. <u>D4131-04J</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☒ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : <u>APR 16 2019</u>		Sequence #: <u>130</u>		QTY Affected : <u>22</u>		MRB (QSI042)	
Description Work Order Deviation				Disposition			
Dimension of 0.174" req'd 0.234" 0.06" over				Scrap destroy no replace.			
				Completed By DAS 40 9-89			
				Lead hand / Supervisor SD 19/04/16			
				QC / QA Coordinator DAS 68 9-89			
Root Cause Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☒ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread					
		Other/Details:					